

**IN THE CLAIMS:**

Please **AMEND** the claims as follows:

1. (Currently Amended) In an implantable medical device of the type that has a sense amplifier that detects cardiac signals associated with intrinsic depolarizations of a heart chamber that exceed a sensing threshold for use detection of a tachyarrhythmia episode, a method comprising:

upon satisfaction of at least one pre-detection criteria associated with potential detection of a tachyarrhythmia episode, measuring peak amplitudes of the cardiac signal; and

storing one or more of the measured peak amplitudes of the cardiac signal and associating the stored one or more peak amplitudes with subsequent delivery of a therapy in response to the tachycardia episode;

~~transmitting the stored one or more of the peak amplitudes to an external device; and~~

~~transmitting an adjustment to the sensing threshold from the external device to the implantable medical device, the adjustment to the sensing threshold being in response to transmitted stored one or more of the measured peak amplitudes.~~

2. (Previously Presented) The method of Claim 1, wherein the sensing threshold is adjusted to a level related to the one or more of the measured peak amplitudes to assure sensing of cardiac signals having diminished peak amplitudes during tachyarrhythmia episodes.

3. (Original) The method of Claim 2, wherein the implantable medical device further has the capability of delivering at least one anti-tachyarrhythmia therapy to the heart chamber upon satisfaction of detection criterion for a tachyarrhythmia episode.

4. (Original) The method of Claim 1, wherein the implantable medical device further has the capability of delivering at least one anti-tachyarrhythmia therapy to the heart chamber upon satisfaction of detection criterion for a tachyarrhythmia episode.

5. (Previously Presented) The method of Claim 1, further comprising:  
comparing the one or more of the measured peak amplitudes of the cardiac signal to the sensing threshold and issuing a sense event signal when the one or more of the measured peak amplitudes meets the sensing threshold;  
and

processing sense event signals in relation to at least one pre-detection criteria associated with potential detection of a tachyarrhythmia episode.

6. (Previously Presented) The method of Claim 5, wherein the sensing threshold is adjusted to a level related to the one or more measured peak amplitudes to assure sensing of cardiac signals having diminished peak amplitudes during tachyarrhythmia episodes.

7. (Currently Amended) In an implantable medical device of the type that has a sense amplifier that detects cardiac signals associated with intrinsic depolarizations of a heart chamber that exceed a sensing threshold for use detection of a tachyarrhythmia episode, a method comprising:

upon satisfaction of at least one detection criteria associated with a tachyarrhythmia episode, measuring peak amplitudes of the cardiac signal;  
storing one or more of the measured peak amplitudes of the cardiac signal  
and associating the stored one or more peak amplitudes with subsequent delivery of a therapy in response to the tachycardia episode;

transmitting the stored one or more of the peak amplitudes to an external device; and

transmitting an adjustment to the sensing threshold from the external device to the implantable medical device, the adjustment to the sensing threshold being in response to transmitted stored one or more of the measured peak amplitudes.

8. (Previously Presented) The method of Claim 7, wherein the sensing threshold is adjusted to a level related to the one or more measured peak amplitudes to assure sensing of cardiac signals having diminished peak amplitudes during tachyarrhythmia episodes.

9. (Original) The method of Claim 8, wherein the implantable medical device further has the capability of delivering at least one anti-tachyarrhythmia therapy to the heart chamber upon satisfaction of the at least one detection criteria for a tachyarrhythmia episode.

10. (Original) The method of Claim 7, wherein the implantable medical device further has the capability of delivering at least one anti-tachyarrhythmia therapy to the heart chamber upon satisfaction of the at least one detection criteria for a tachyarrhythmia episode.

11. (Previously Presented) The method of Claim 10, further comprising:

comparing the one or more of the measured peak amplitudes of the cardiac signal to the sensing threshold and issuing a sense event signal when the one or more of the measured peak amplitudes meets the sensing threshold; and

processing sense event signals in relation to at least one detection criterion associated with potential detection of a tachyarrhythmia episode.

12. (Previously Presented) The method of Claim 11, wherein the sensing threshold is adjusted to a level related to the one or more measured peak amplitudes to assure sensing of cardiac signals having diminished peak amplitudes during tachyarrhythmia episodes.

13. (Currently Amended) In an implantable medical device of the type that has a sense amplifier that detects cardiac signals associated with intrinsic depolarizations of a heart chamber that exceed a sensing threshold for use detection of a tachyarrhythmia episode, a system comprising:

means for measuring the peak amplitude of the cardiac signal upon satisfaction of at least one pre-detection criteria associated with potential detection of a tachyarrhythmia episode;

means for storing one or more measured peak amplitude of the cardiac signal and associating the stored one or more peak amplitudes with subsequent delivery of a therapy in response to the tachycardia episode;

means for transmitting the stored one or more of the peak amplitudes to an external device; and

means for transmitting an adjustment to the sensing threshold from the external device to the implantable medical device, the adjustment to the sensing threshold being in response to transmitted stored one or more of the measured peak amplitudes.

14. (Previously Presented) The system of Claim 13, wherein the sensing threshold is adjusted to a level related to the one or more measured peak amplitudes to assure sensing of cardiac signals having diminished peak amplitudes during tachyarrhythmia episodes.

15. (Original) The system of Claim 14, wherein the implantable medical device further has the capability of delivering at least one anti-

tachyarrhythmia therapy to the heart chamber upon satisfaction of detection criterion for a tachyarrhythmia episode.

16. (Original) The system of Claim 13, wherein the implantable medical device further comprises means for delivering at least one anti-tachyarrhythmia therapy to the heart chamber upon satisfaction of detection criterion for a tachyarrhythmia episode.

17. (Previously Presented) The system of Claim 13, further comprising:

means for comparing the one or more of the measured peak amplitudes of the cardiac signal to the sensing threshold and issuing a sense event signal when the one or more of the measured peak amplitudes meets the sensing threshold; and

means for processing sense event signals in relation to at least one pre-detection criteria associated with potential detection of a tachyarrhythmia episode.

18. (Previously Presented) The system of Claim 17, wherein the sensing threshold is adjusted to a level related to the one or more measured peak amplitudes to assure sensing of cardiac signals having diminished peak amplitudes during tachyarrhythmia episodes.

19. (Currently Amended) In an implantable medical device of the type that has a sense amplifier that detects cardiac signals associated with intrinsic depolarizations of a heart chamber that exceed a sensing threshold for use detection of a tachyarrhythmia episode, a system comprising:

means for measuring the peak amplitude of the cardiac signal upon satisfaction of at least one detection criteria associated with a tachyarrhythmia episode;

means for storing one or more measured peak amplitude of the cardiac signal; and

means for transmitting the stored one or more of the peak amplitudes to an external device and associating the stored one or more peak amplitudes with subsequent delivery of a therapy in response to the tachycardia episode ; and

~~means for transmitting an adjustment to the sensing threshold from the external device to the implantable medical device, the adjustment to the sensing threshold being in response to transmitted stored one or more of the measured peak amplitudes.~~

20. (Previously Presented) The system of Claim 19, wherein the sensing threshold is adjusted to a level related to the one or more measured peak amplitudes to assure sensing of cardiac signals having diminished peak amplitudes during tachyarrhythmia episodes.

21. (Original) The system of Claim 20, wherein the implantable medical device further comprises means for delivering at least one anti-tachyarrhythmia therapy to the heart chamber upon satisfaction of the at least one detection criteria for a tachyarrhythmia episode.

22. (Original) The system of Claim 19, wherein the implantable medical device further comprises means for delivering at least one anti-tachyarrhythmia therapy to the heart chamber upon satisfaction of the at least one detection criteria for a tachyarrhythmia episode.

23. (Previously Presented) The system of Claim 22, further comprising:

means for comparing the one or more of the measured peak amplitudes of the cardiac signal to the sensing threshold and issuing a sense event signal

when the one or more of the measured peak amplitudes meets the sensing threshold; and

means for processing sense event signals in relation to at least one detection criterion associated with potential detection of a tachyarrhythmia episode.

24. (Previously Presented) The system of Claim 23, wherein the sensing threshold is adjusted to a level related to the one or more measured peak amplitudes to assure sensing of cardiac signals having diminished peak amplitudes during tachyarrhythmia episodes.